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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,854

09/25/2003

Hidetoshi Watanabe

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08/29/2006

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

NGUYEN, THINH H

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/669,854	<b>Applicant(s)</b> WATANABE ET AL.	
	<b>Examiner</b> Thinh H. Nguyen	<b>Art Unit</b> 2861	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 25 is/are allowed.
- 6) ☒ Claim(s) 14-17, 21-24 and 26 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/7/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 22-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following limitations lack antecedent basis:

“said first manifold plate” (cl.22, line 2).

The term “second manifold plate” is not positively recited, therefore it also lacks antecedent basis.

Claims 23-24 are rejected by virtue of their dependency on claim 22.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14-16, 21, and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ishii et al. (U.S. 6,206,501)

Re claims 14-16, 21, with reference to figs. 2, 3A, 3B, Ishii discloses the instant claimed inkjet head having a laminated structure of a plurality of plates including at least one cavity plate (105; fig.3B) and at least one manifold plate (115),

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a plurality of ink pressure chambers (103) formed in said at least one cavity plate, each of said ink pressure chambers selectively pressurizing ink supplied thereto to eject the ink from said inkjet head; and

a manifold channel (see fig.3B, elements 109, 114, 117, 121, 134, fig.4D) having a substantially looped opening formed therethrough surrounding a portion of said manifold plate and being in fluid communication with each of said ink pressure chambers to distribute the ink thereamong;

Re claims 16, 26, the looped openings of said plurality of manifold plates defining said manifold channel as said plurality of manifold plates are stacked; wherein the manifold plate comprises a plurality of independent manifold channels. (see fig.3B, elements 109, 114, 117, 121, 134);

Re claim 21, a plurality of ink supply channels (116) connected to said manifold channel to supply ink from external ink supply to said manifold channel.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. in view of Burr et al. (U.S.5,907,338)

Ishii discloses the instant claimed subject matter except for said plurality of manifold plates being formed by etching.

Burr teaches the manifold plates stacking arrangement wherein the plate (col.5, line 58 – col.6, line 7) can be chemically etched in manufacturing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the etching technique in Ishii according to the overall basic teachings of Burr for ink jet head manufacturing.

***Allowable Subject Matter***

6. Claims 1-13, 25 are allowed over the prior art of record.
7. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Claims 22-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Patent Application Information Retrieval (PAIR)***

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Contact Information**

10. Any inquiry concerning this communication should be directed to examiner Thinh Nguyen at telephone number (571) 272-2257. The examiner can generally be reached Mon-Wed, and Thurs from 6:30A – 3:00P. The official fax phone number for the organization is (571) 273-8300. The examiner supervisor, Vip Patel, can also be reached at (571) 272-2458.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1782.



Thinh Nguyen  
August 20, 2006

**Thinh Nguyen**  
**Primary Examiner**  
**Technology Center 2800**